

Accident / Incident Report Closed



Unit/Department	Process Area	Site	Report Number
South Operation-Elyria		ELYRIA	0084-SOPS-13-0167
Report Date	Incident Date	Incident Time	Copied From
10/23/2013	10/23/2013	01:00 PM	
Incident Location	Team Leader / Supervisor	Reported By	
588 Gen Cat	Raymond A Navarro	Raymond A Navarro	
Title of Event (Limit to 90 characters)	Category	Division / Bus. Group / Subgroup Code	
Nox Release on #3 RC.	<input type="checkbox"/> Safety & Health <input type="checkbox"/> Environmental	CC / G-CCP	

Incident Classification

<input type="checkbox"/> Near Miss	<input type="checkbox"/> Property Loss	<input type="checkbox"/> Contractor
<input checked="" type="checkbox"/> Process Safety	<input type="checkbox"/> Citation / NOV	<input type="checkbox"/> Contractor Injury / Illness
<input type="checkbox"/> Injury / Illness	<input type="checkbox"/> Health Exposure	<input type="checkbox"/> Contract Injury / Illness
<input checked="" type="checkbox"/> Spill / Release	<input type="checkbox"/> Inspection	<input type="checkbox"/> PSM
<input type="checkbox"/> Permit / Regulatory Deviation	<input type="checkbox"/> Major Incident	<input checked="" type="checkbox"/> Plant Upset
<input type="checkbox"/> Fire	<input type="checkbox"/> Non-Occupational	<input type="checkbox"/> EHS Management System Failure
<input type="checkbox"/> Odor Complaint	<input type="checkbox"/> RMP	<input type="checkbox"/> Other

Describe Event / What Happened

At 1:00 pm the evacuation alarm was pulled and the entire department was evacuated. The report was that the Nox came from the #3RC when the feed was started. It was during the ERT response that it was found that the CTO had not been placed on online and it was the likely cause of the Nox.

Immediate Corrective Action or Response

Evacuation of the department and ERT response. CTO placed online.

Immediate Cause

Likely CTO was not placed on line at the start of the #3 RC feed.

Spill Release Type(s)	Non RQ Spill / Release						
Chemical(s) Involved	CAS #	Phy. State	Air	Land	Water	Contmt	Units
Nitrogen Dioxide (NOx)	10102-44-0	Gas	2.4	0	0	0	lbs
Disposition of Material	Release to Air						
Weather Conditions	Skies:	Temperature:	Wind Direction:	Wind Speed:			

Cause Narrative

The likely reason for the Nox release is that the CTO scrubber was not verified to be online before the feed was started in the CRT room. Calciner had been off for four days prior to starting up. Additionally, there are no interlocks between the calciner and the scrubber associated with it. It is possible to start the calciner without verifying that the scrubber is not online.

Contributing Causes	Root/Primary Causes		
There are no interlocks between the #3RC (possibly other RC's) and the scrubber associated with them.	15 - Design Input/Output	17 - Design Output LTA	17 - Design Output LTA
No alarm is displayed on the CRT screens if the feed is started before the scrubber is placed online.	138 - Human Factors Engineering	160 - Intolerant System	161 - Errors Not Detectable
CRT's are not trained on what to look for on the Control Screen prior to starting up calciners.	163 - Training	164 - No Training	166 - Training Requirements Not Identified
There is no calciner exhaust system pressure	138 - Human	140 - Workplace	141 - Controls/Displays LTA

alarm.	Factors Engineering Layout
--------	----------------------------

Explanation of Root Causes

15-17-17 - There does not seem to be any interlocks between the calciner and the CTO (possibly affecting more calciners) that would require that the CTO is placed online before feeding can start/resume.
 138-160-161 - There does not seem to be an alarm (visual) that is displayed if the feed is started on the calciner but the CTO is not online.
 163/164/166 - Information is on the screen on scrubber pressure but most CRT's are not aware of this and have not been trained.
 138/140/141 - If alarm was in place this would have alarmed the CRT that there was no suction.

Any known or potential off-site impacts?	No	PSM Incident?	No	Estimated Cost:	5,000.00 USD
Investigation Team	Raymond A Navarro; William Grodecki; Kirk Sullenberger; Gregory A Menz; Jennifer Bailey				

Item	Corrective Action(s) to prevent recurrence	Responsible Person	Target Date	Final Closed Date	VC Req	VE Req
1	C: Review AIM in safety meeting. Alert CRT's to information currently available on Control Screen in regards to scrubbers.	Raymond A Navarro/NA/BASF	11/30/2013	11/30/2013	N	N
2	B: Add operator prompt to verify scrubber is online prior to starting feeder.	Kirk Sullenberger/BASF-CATALYSTS/BASF	03/31/2014	05/09/2014	N	N
3	C: Add calciner pressure exhaust system alarm to all calciners.	Kirk Sullenberger/BASF-CATALYSTS/BASF	04/25/2014	06/25/2014	N	N

Approved By:

Manager / Dept. Head	Jason M Therrien 11/27/2013 07:57 AM
EHS Unit Coordinator	Leon Zavodnik 11/18/2013 07:38 AM
Confidential	